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ACC/AHA PRACTICE GUIDELINES

ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: Executive Summary

A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1995 Guidelines for the Evaluation and Management of Heart Failure)

Developed in Collaboration with the International Society for Heart and Lung Transplantation
Endorsed by the Heart Failure Society of America

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This document, as well as the corresponding full-text guidelines, is available on the World Wide Web sites of the American College of Cardiology (www.acc.org) and the American Heart Association (www.americanheart.org). Single reprints of the executive summary are available for $5.00 each by calling 800-253-4636 (US only) or writing the American College of Cardiology, Educational Services, 9111 Old Georgetown Road, Bethesda, MD 20814-1699. To purchase additional reprints up to 999 copies, call 800-611-6083 (US only) or fax 413-665-2671; 1000 or more copies, call 214-706-1466, fax 214-691-4342, or e-mail pubauth@harcourt.com (specify version: Executive Summary—71-0125; Full Text—71-1025).

*Former Task Force member during this writing effort.

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I. INTRODUCTION

Heart failure (HF) is a major public health problem in the United States. Nearly 5 million patients in this country have HF, and nearly 500,000 patients are diagnosed with HF for the first time each year. The disorder is the underlying reason for 12 to 15 million office visits and 6.5 million hospital days each year (1). During the last 10 years, the annual number of hospitalizations has increased from approximately 550,000 to nearly 900,000 for HF as a primary diagnosis and from 1.7 to 2.6 million for HF as a primary or secondary diagnosis (2). Nearly 300,000 patients die of HF as a primary or contributory cause each year, and the number of deaths has increased steadily despite advances in treatment.

HF is primarily a disease of the elderly (3). Approximately 6% to 10% of people older than 65 years have HF (4), and approximately 80% of patients hospitalized with HF are more than 65 years old (2). HF is the most common Medicare diagnosis-related group, and more Medicare dollars are spent for the diagnosis and treatment of HF than for any other diagnosis (5). The total inpatient and outpatient costs for HF in 1991 were approximately $38.1 billion, which was approximately 5.4% of the healthcare budget that year (1). In the United States, approximately $500 million annually is spent on drugs for the treatment of HF.

The American College of Cardiology (ACC) and the American Heart Association (AHA) first published guidelines for the evaluation and management of HF in 1995 (6). Since that time, a great deal of progress has been made in the development of both pharmacological and nonpharmacological approaches to treatment for this common, costly, disabling, and generally fatal disorder. For this reason, the 2 organizations believed that the time was right to reassess and update these guidelines, fully recognizing that the optimal therapy of HF remains a work in progress and that future guidelines will supersede these.

The writing committee was composed of 7 members who represented the ACC and AHA, as well as invited participants from the American College of Chest Physicians, the Heart Failure Society of America, the International Society for Heart and Lung Transplantation, the American Academy of Family Physicians, and the American College of Physicians–American Society of Internal Medicine. Both the academic and private practice sectors were represented. This document was reviewed by 3 official reviewers nominated by the ACC, 3 official reviewers nominated by the AHA, 1 reviewer nominated by the Heart Failure Society of America, 1 reviewer nominated by the International Society for Heart and Lung Transplantation, 1 reviewer nominated by the American Academy of Family Physicians, 1 reviewer nominated by the National Heart Foundation of Australia, the ACC Hypertensive Disease Committee and 16 content reviewers.

In formulating the present document, the writing committee decided to take a new approach to the classification of HF that emphasized both the evolution and progression of the disease. In doing so, we identified 4 stages of HF. Stage A identifies the patient who is at high risk for developing HF but has no structural disorder of the heart; Stage B refers to a patient with a structural disorder of the heart but who has never developed symptoms of HF; Stage C denotes the patient with past or current symptoms of HF associated with underlying structural heart disease; and Stage D designates the patient with end-stage disease who requires specialized treatment strategies such as mechanical circulatory support, continuous inotropic infusions, cardiac transplantation, or hospice care (see Table 1 and Fig. 1). Only the latter 2 stages, of course, qualify for the traditional clinical diagnosis of HF for diagnostic or coding purposes. This classification recognizes that there are established risk factors and structural prerequisites for the development of HF and that therapeutic interventions performed even before the appearance of left ventricular dysfunction or symptoms can reduce the morbidity and mortality of HF. This classification system is intended to complement but not to replace the New York Heart Association (NYHA) functional classification, which primarily gauges the severity of symptoms in patients who are in stage C or D. It has been recognized for many years, however, that the NYHA functional classification reflects a subjective assessment by a physician and changes frequently over short periods of time and that the treatments used do not differ significantly across the classes. Therefore, the committee believed that a staging system was needed that would reliably and objectively identify patients in the course of their disease and would be linked to treatments that were uniquely appropriate at each stage of their illness. According to this new approach, patients would be expected to advance from one stage to the next unless progression of the disease was slowed or stopped by treatment. This new classification scheme adds a useful dimension to our thinking about HF similar to that achieved by staging systems for other disorders (e.g., those used in the classification of cancer).

Table 1. Stages of HF

Stage	Description	Examples
A	Patients at high risk of developing HF because of the presence of conditions that are strongly associated with the development of HF. Such patients have no identified structural or functional abnormalities of the pericardium, myocardium, or cardiac valves and have never shown signs or symptoms of HF.	Systemic hypertension; coronary artery disease; diabetes mellitus; history of cardiotoxic drug therapy or alcohol abuse; personal history of rheumatic fever; family history of cardiomyopathy.
B	Patients who have developed structural heart disease that is strongly associated with the development of HF but who have never shown signs or symptoms of HF.	Left ventricular hypertrophy or fibrosis; left ventricular dilatation or hypocontractility; asymptomatic valvular heart disease; previous myocardial infarction.
C	Patients who have current or prior symptoms of HF associated with underlying structural heart disease.	Dyspnea or fatigue due to left ventricular systolic dysfunction; asymptomatic patients who are undergoing treatment for prior symptoms of HF.
D	Patients with advanced structural heart disease and marked symptoms of HF at rest despite maximal medical therapy and who require specialized interventions.	Patients who are frequently hospitalized for HF or cannot be safely discharged from the hospital; patients in the hospital awaiting heart transplantation; patients at home receiving continuous intravenous support for symptom relief or being supported with a mechanical circulatory assist device; patients in a hospice setting for the management of HF.

HF indicates heart failure.

All recommendations provided in this document follow the format of previous ACC/AHA guidelines:

Class I: Conditions for which there is evidence and/or general agreement that a given procedure/therapy is useful and effective.

Class II: Conditions for which there is conflicting evidence and/or a divergence of opinion about the usefulness/efficacy of performing the procedure/therapy.

Class IIa: Weight of evidence/opinion is in favor of usefulness/efficacy.

Class IIb: Usefulness/efficacy is less well established by evidence/opinion.

Class III: Conditions for which there is evidence and/or general agreement that a procedure/therapy is not useful/effective and in some cases may be harmful.

The recommendations listed in this document are evidence based whenever possible. Pertinent medical literature in the English language was identified through a series of computerized literature searches (including Medline and EMBASE) and a manual search of selected articles. References selected and published in this document are representative but not all-inclusive.

The levels of evidence on which these recommendations are based were ranked as level A if the data were derived from multiple randomized clinical trials, level B when data were derived from a single randomized trial or nonrandomized studies, and level C when the consensus opinion of experts was the primary source of recommendation. The strength of evidence does not necessarily reflect the strength of a recommendation. A treatment may be considered controversial although it has been evaluated in controlled clinical trials; conversely, a strong recommendation may be based on years of clinical experience and be supported only by historical data or by no data at all.

The committee elected to focus this document on the prevention of HF, as well as the evaluation and management of chronic HF in the adult patient with left ventricular systolic and diastolic dysfunction. It specifically did not consider acute HF, which might merit a separate set of guidelines and which is addressed in part in the ACC/AHA guidelines for the management of patients with acute myocardial infarction (7). We have also excluded HF in children, both because the underlying causes of HF in children differ from those in adults and because none of the controlled trials of treatments for HF have included children. We have not considered the management of HF due to primary valvular disease (see ACC/AHA guidelines on management of patients with valvular heart disease) (8) or congenital malformations, and we have not included recommendations for the treatment of specific myocardial disorders (e.g., hemochromatosis, sarcoidosis, or amyloidosis).

The ACC/AHA guidelines for the evaluation and management of chronic heart failure in the adult were approved for publication by the governing bodies of the ACC and AHA. These guidelines will be reviewed annually after publication and will be considered current unless the ACC/AHA Task Force on Practice Guidelines revises or withdraws them from circulation.